

COMMITTEE OF THE WHOLE - NOVEMBER 3, 2008

TRAFFIC REVIEW – THORNHILL WOODS DRIVE FROM HIGHWAY 7 TO SUMMERIDGE DRIVE

RECOMMENDATION

The Commissioner of Engineering and Public Works recommends:

1. That no further action is required regarding additional traffic calming measures on Thornhill Woods Drive;
2. That York Region Police be requested to enforce the existing speed limit and stop signs on this section Thornhill Woods Drive; and
3. That as part of the 2008 pavement marking program, the word 'STOP' be painted on the approaches of Thornhill Woods Drive at the intersections of Misty Sugar Trail and at Maple Sugar Lane to further identify the existing stop controls, as a pilot project to allow staff to monitor its effectiveness.

Economic Impact

The pavement marking work can be completed within the approved operating budget for 2008.

Communications Plan

The residents will be advised of Council's decision on this matter.

Purpose

To present additional information, as previously directed by Council to review the traffic on Thornhill Woods Drive.

Background - Analysis and Options

At its meeting on March 31, 2008, Council directed:

"That Engineering staff be requested to conduct a traffic study along the Southern end of Thornhill Woods Drive, focusing from Highway 7 to Summeridge Drive and report on those findings"

Existing Conditions

Thornhill Woods Drive is classified as a feeder roadway with a 23.0 metre right-of-way and 11.5 metre pavement width. The existing posted speed limit is 40 km/h. Thornhill Woods Drive is a main thoroughfare that runs north-south from Rutherford Road to Highway 7. The section between Highway 7 and Summeridge Drive has a total of seven (7) intersections; there are three all-way stop controlled intersections and one signal controlled intersection. There are painted centre line and road narrowings from Summeridge Drive to Misty Sugar Lane. There are two lanes in each direction as well as centre medians on Thornhill Woods Drive from Misty Sugar Lane to Highway 7. The area is shown on Attachment No. 1.

The concerns raised by the residents are the traffic volume, vehicle speeds, stop sign compliance and infiltration problems.

There is a York Region Transit route (number 23) running on Thornhill Woods Drive from Highway 7 to Maple Sugar Lane.

Traffic Volume / Speed

Utilizing Automated Traffic Recorders (ATR's) staff conducted speed and volume studies on Thornhill Woods Drive from June 16, 2008 to June 20, 2008. Data was collected on a 24-hour basis. The recorders were installed on Thornhill Woods Drive, 13 metres south of Bentwood Crescent (north access) and 14 metres south of Seabreeze Avenue. The results are summarized below:

Location	Direction	Average Speed	85 th Percentile Speed	Highest Speed	Average Daily Traffic
Thornhill Woods Dr, south of Bentwood Cres	Northbound	45 km/h	52 km/h	76 km/h	3821
	Southbound	51 km/h	58 km/h	81 km/h	3727
Thornhill Woods Dr, south of Seabreeze Ave	Northbound	44 km/h	52 km/h	77 km/h	3888
	Southbound	47 km/h	54 km/h	81 km/h	3789

The recorded average speeds on Thornhill Woods Drive ranged between 44 km/h and 51 km/h. The recorded 85th percentile speed (the speed at which 85 percent of the vehicles are travelling at or below) on Thornhill Woods Drive ranged between 52 km/h and 58 km/h.

Staff also conducted an AM and PM radar study on July 24, 2008. The study was completed on Thornhill Woods Drive north of Leameadow Road during the peak time periods of 8:00-9:00 am and 4:00-5:00 pm. The data recorded was similar to the Automated Traffic Recorders with an average speed ranging between 43 km/h and 46 km/h and recorded 85th percentile speed ranging between 48 km/h and 52 km/h.

In accordance with the Neighbourhood Traffic Committee Policy and Procedure, traffic calming measures may be considered where the posted speed is 50 km/h or less and the average speed is 10 km/h or greater than the posted speed limit. Therefore, traffic calming may be considered on Thornhill Woods Drive. However, since Thornhill Woods Drive is a primary emergency response route, vertical traffic calming measures cannot be considered. Other measures such as chicanes, painted road narrowings, medians or a combination of these alternatives can be considered.

In order to implement traffic calming, the Council approved Policy and Procedure should be followed. This requires the submission of a formal request from the community in the form of a petition or a written request from a registered ratepayers group.

Stop Sign Compliance

Staff completed a Stop Sign Compliance Study at the three (3) intersections along Thornhill Woods Drive. These included; Thornhill Woods Drive and Summeridge Drive, Thornhill Woods Drive and Misty Sugar Trail, and Thornhill Woods Drive and Maple Sugar Lane. The studies were conducted on Wednesday June 4, 2008 between 8:00 am - 9:00 am and 4:00 pm - 5:00pm. The results are summarized below:

Intersection	% of Drivers Stopping	
	Full Stop	Rolling or No Stop
Thornhill Woods Drive and Summeridge Drive	97 %	3 %
Thornhill Woods Drive and Misty Sugar Trail	13 %	87 %
Thornhill Woods Drive and Maple Sugar Lane	27 %	73 %

Staff will send correspondence to York Regional Police for increased stop sign enforcement at the intersections of Thornhill Woods Drive and Misty Sugar Trail and Thornhill Woods Drive and Maple Sugar Lane. These intersections have high percentages of rolling and non stopping vehicles.

As a pilot project, staff recommend proceeding with painting the word 'STOP' on the approaches of Thornhill Woods Drive at both of the above mentioned intersections. The non stopping percentages are high and this wording may assist motorists to stop at the existing stop sign. If approved, a threshold percentage value of 70% of non compliant motorists will be used at other intersections where there is an identified stop compliance problem. Other municipalities such as the Town of Milton and the Town of Oakville paint the word 'STOP' on some roadway approaches, to encourage compliance. This is a legal practice in the traffic operation industry. The painting can be done as part of the pavement marking contract for 2008.

Infiltration Study

Staff conducted an infiltration study on September 4, 2008 during the peak traffic periods of 7:00 am to 9:00 am and 4:00 pm to 6:00 pm on Thornhill Woods Drive. The concern had been raised that there is a lot of cut-through traffic using Thornhill Woods Drive as a short-cut alternative to Highway 7.

The infiltration routes and results of the studies are summarized in the following table.

September 4, 2008				
Time	Entering at	Exiting at	Total Inbound Vehicles	Total Infiltration
7:00am to 9:00am	Summeridge Drive	Highway 7	695	178
Total AM Infiltration = 178 vehicles or 25.6%				
4:00pm to 6:00pm	Highway 7	Summeridge Drive	350	186
Total PM Infiltration = 186 vehicles or 53.1%				

Infiltration is considered to be an issue when the infiltration rates exceed 30%. Although the PM infiltration was 186 vehicles or 53% of the 350 inbound vehicles, the total inbound volume during the PM peak traffic periods is relatively low at 350 vehicles.

Thornhill Woods Drive is classified as a feeder roadway and also as one of the two main thoroughfares that runs north-south from Rutherford Road to Highway 7. Typically, a feeder roadway accommodates up to 8,000 vehicles per day (source; Transportation Association of Canada, Geometric Design Guide for Canadian Roads). Our study indicates that Thornhill Woods Drive has 7,677 vehicles per day which is within the capacity of a feeder roadway. The number of vehicles identified as 'cut-through' traffic during the AM and PM peak period is 364. This indicates a small number (4.7%) overall to the total daily traffic, are 'cut-through' vehicles.

There are several subdivisions within Block 10 north of Summeridge Drive that drivers will use Thornhill Woods Drive as a southern exit from the subdivision.

In the past, the threshold percentage of 30% was used to identify a problem with cut-through traffic, and action would be taken only if actual cut-through volumes were significant. Based on the results of the studies, Staff does not recommend any turning prohibitions for Thornhill Woods Drive, because although the percentage is high, the number of vehicles is not significant.

Relationship to Vaughan Vision 2020

Enhance and Ensure Community Safety, Health & Wellness – to advocate for, protect and enhance community safety, health and wellness through education, design and enforcement.

This report is consistent with the priorities previously set by Council.

Regional Implications

Not Applicable.

Conclusion

Based on our review, it is concluded that no further action is required regarding additional traffic calming measures on Thornhill Woods Drive. That the word 'STOP' be painted on the approaches of Thornhill Woods Drive at the intersections of Misty Sugar Trail and at Maple Sugar Lane, as a pilot project to allow staff to monitor the effectiveness to further identify the existing stop controls.

Attachments

1. Location Map

Report prepared by:

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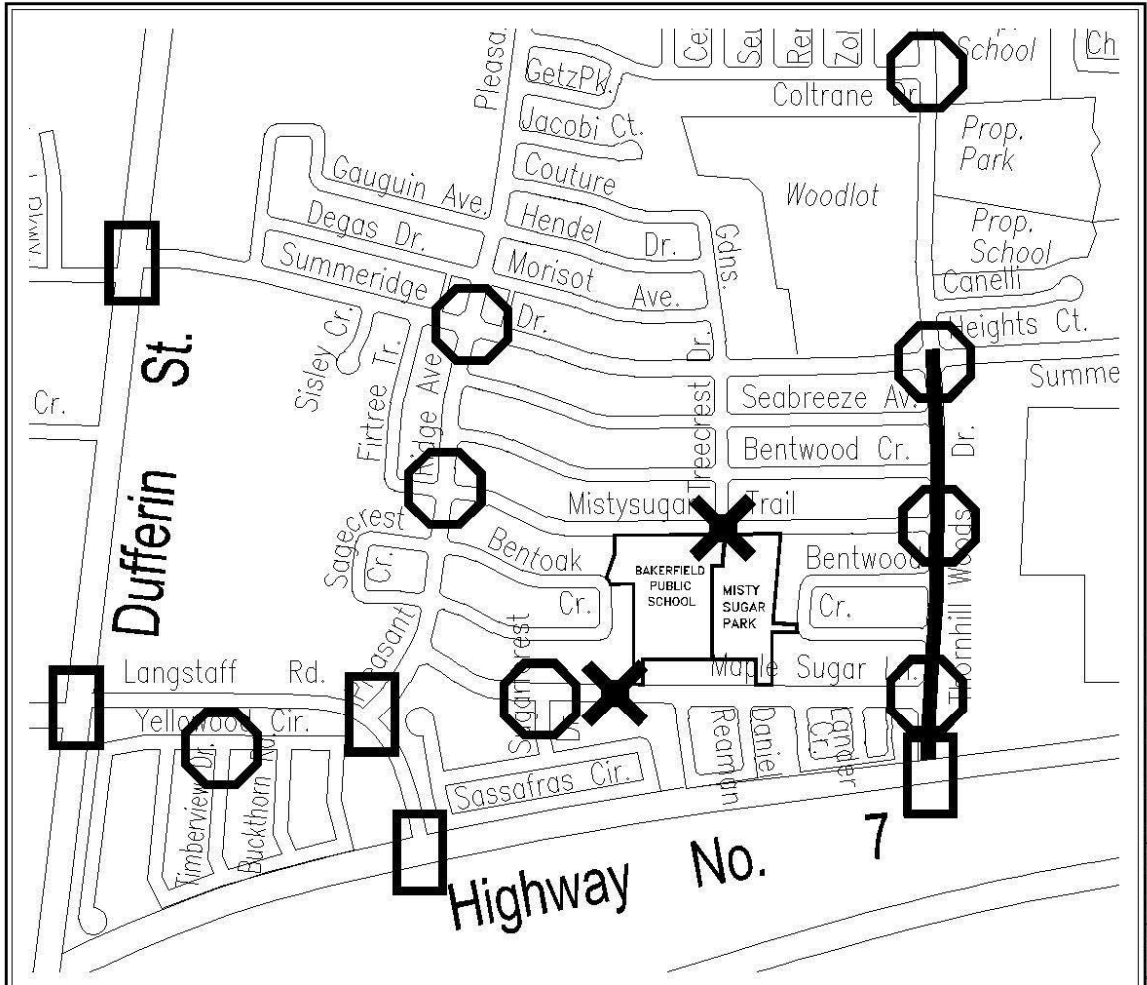
Respectfully submitted,

Bill Robinson, P. Eng.
Commissioner of Engineering and Public Works

Debbie Korolnek, P. Eng.
Director of Engineering Services





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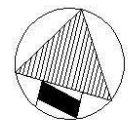
ATTACHMENT No. 1



THORNHILL WOODS DRIVE TRAFFIC REVIEW

LEGEND

-  ROADWAY UNDER REVIEW
-  EXISTING TRAFFIC SIGNALS
-  EXISTING ALLWAY STOP CONTROL
-  EXISTING SUPERVISED SCHOOL CROSSING



NOT TO SCALE